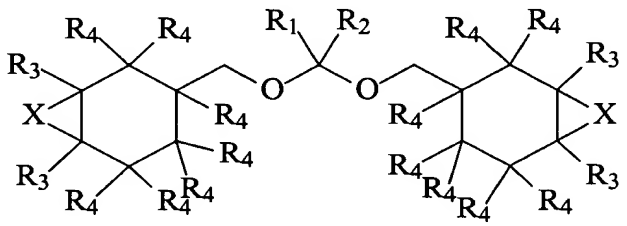
AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Cancelled)

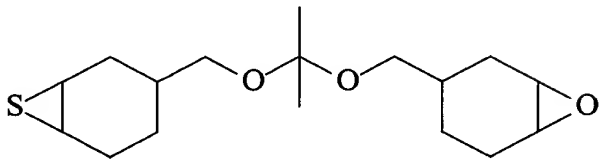
2. (Currently Amended) A curable composition ~~as in claim 1, wherein said~~ comprising a compound having at least one thermally cleavable linkage ~~is a), and is~~ represented by the formula:



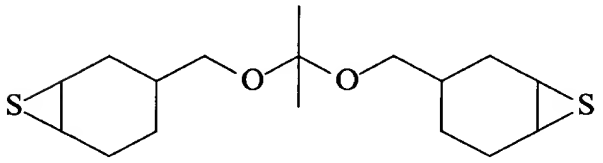
II

where R_1 and R_2 are each independently selected from hydrogen, methyl, ethyl, propyl, phenyl, hydroxyphenyl, methoxyphenyl, tolyl, and benzyl; each R_3 is independently selected from hydrogen, methyl, ethyl, propyl, and isopropyl; each R_4 is independently selected from hydrogen, methyl, ethyl, propyl, isopropyl, butyl, isobutyl, *t*-butyl, C_{1-4} alkoxy, halogen, cyano and nitro; and X is independently selected from O and S, provided that at least one X is S.

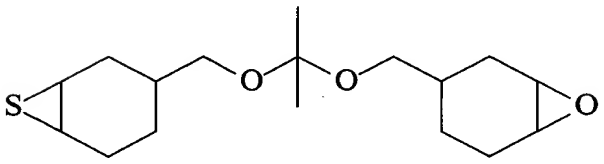
3. (Original) A curable composition as in claim 2, wherein said compound is selected from the group consisting of:



III



III′



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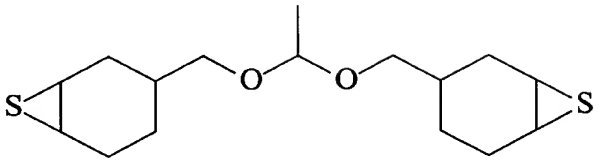
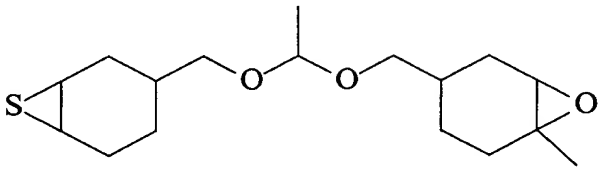


IV'



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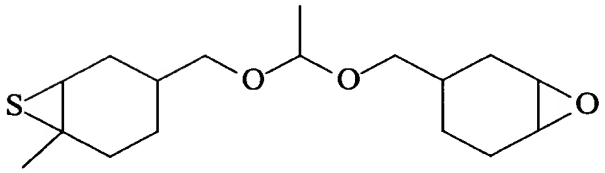

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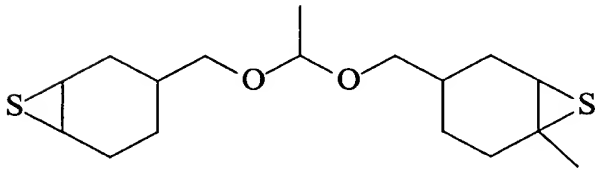
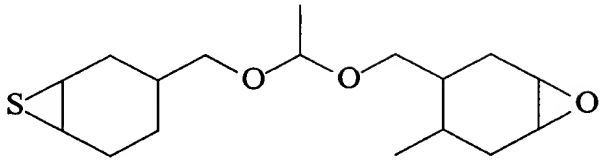
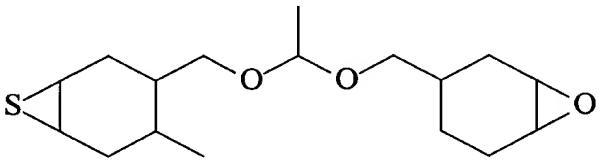


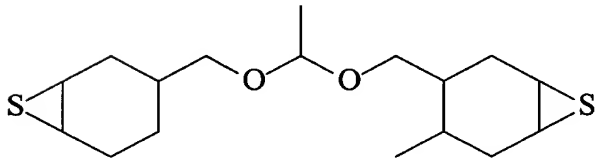
V''



VI

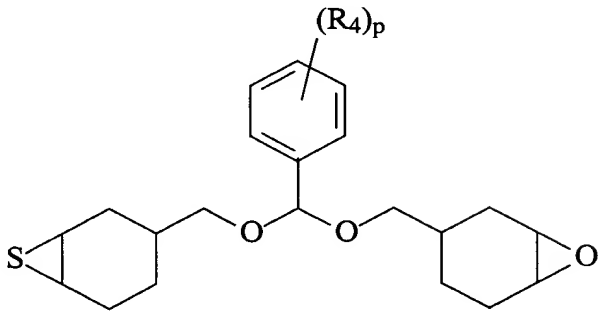


VI′

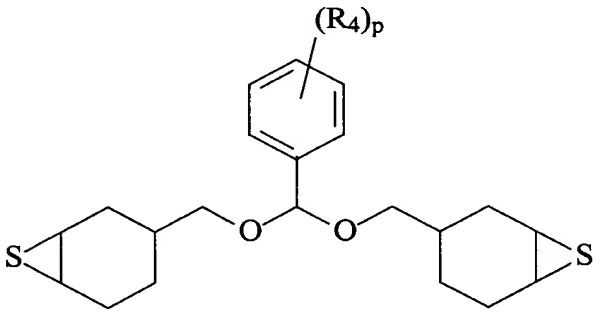


VI′′

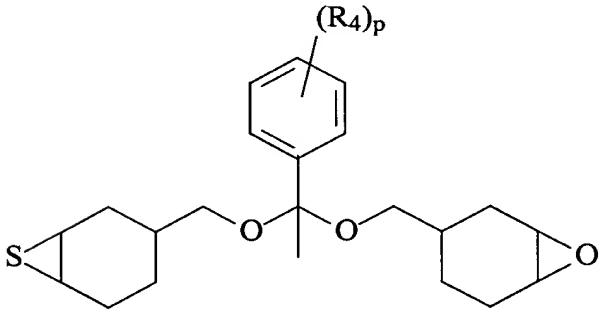
4. (Original) A curable composition as in claim 2, wherein said compound is selected from the group consisting of:



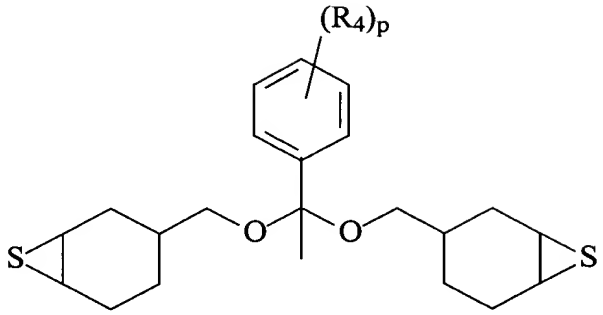
VII



VII'



VIII

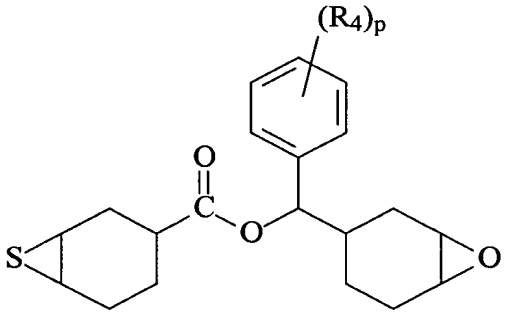


VIII'

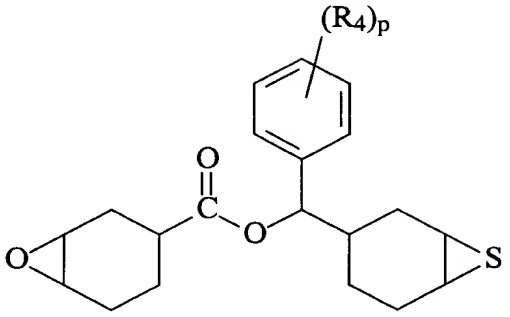
where R_4 is hydrogen, methyl, ethyl or propyl, and p is 1-5.

5-6. (Cancelled)

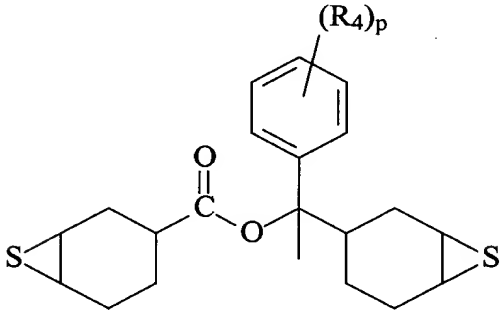
7. (Currently Amended) A curable composition ~~as in claim 5,~~ comprising a compound having at least one thermally cleavable linkage, wherein said compound is selected from the group consisting of:



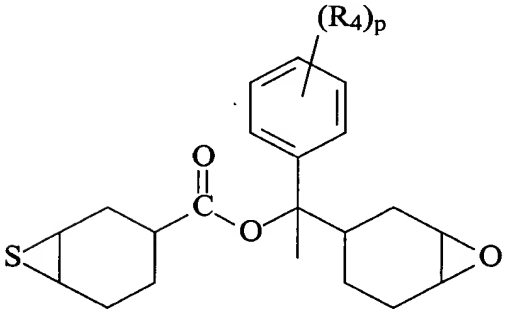
XVII



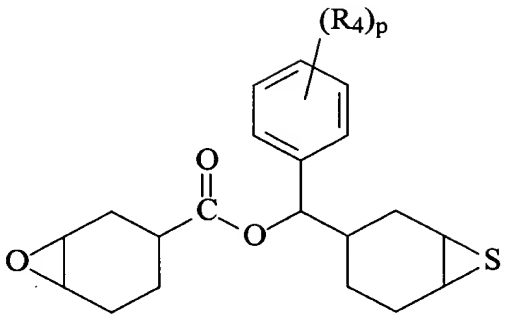
XVII'



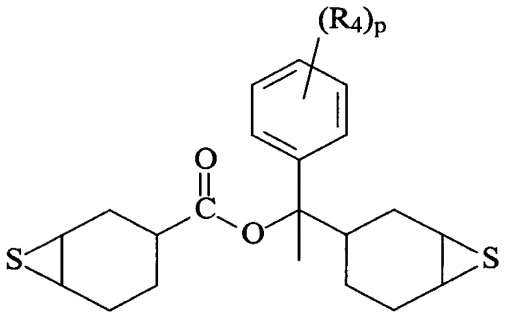
XVII''



XVIII



XVIII′



XVIII′′

where R_4 is hydrogen, methyl, ethyl or propyl, and p is 1-5.

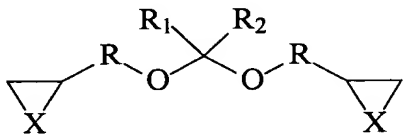
8. (Currently Amended) A ~~curable~~ thermosetting resin composition as in claim ~~1~~ 10, reaction products of which are reworkable through thermal decomposition under exposure to temperature conditions in excess of those used to cure the composition.

9. (Cancelled)

10. (Currently Amended) A thermosetting resin composition ~~as in claim 9, further~~ comprising:

l) a curable resin component, at least a portion of which comprises a curable composition comprising a compound having at least one thermally cleavable linkage and being selected from the group consisting of:

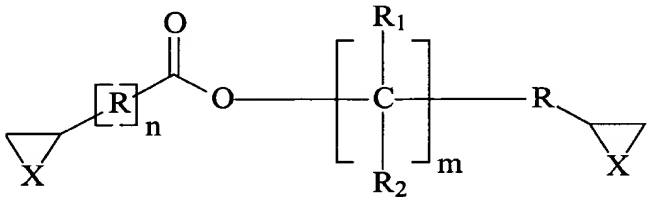
a)



I

where each R is independently selected from C_1-C_{10} alkyl, cycloalkyl, aryl, aralkyl, and alkaryl; R_1 and R_2 are each independently selected from hydrogen, methyl, ethyl, propyl, phenyl, hydroxyphenyl, methoxyphenyl, tolyl, and benzyl; and X is independently selected from O and S, provided that at least one X is S; and

b)



IX

where each R is independently selected from C_1-C_{10} alkyl, cycloalkyl, aryl, aralkyl, and alkaryl; R_1 and R_2 are each independently selected from hydrogen, methyl, ethyl, propyl, phenyl, hydroxyphenyl, methoxyphenyl, tolyl, and benzyl; m is 0 or 1; n is 0 or 1, and X is independently selected from O and S, provided that at least one X is S;

and combinations thereof;

II) a curing agent component comprising a member selected from the group consisting of anhydride compounds, amine compounds, amide compounds, imidazole compounds, and combinations thereof; ~~and~~

III) one or more materials selected from the group consisting of flowability agents, adhesion promoters, and cyanate esters; and

IV) optionally, an inorganic filler component.

11. (Cancelled)

12. (Currently Amended) A thermosetting resin composition according to claim ~~11~~ 10, wherein the flowability agent is a member selected from the group consisting of silanes, titanates and combinations thereof.

13. (Cancelled)

14. (Currently Amended) A thermosetting resin composition according to claim ~~13~~ 10, wherein the adhesion promoter is a member selected from the group consisting of glycidyl trimethoxysilane, gamma-amino propyl triethoxysilane, and combinations thereof.

15. (Cancelled)

16. (Original) A thermosetting resin composition according to claim 10, wherein the inorganic filler component may be selected from the group consisting of materials constructed of or containing reinforcing silicas,

aluminum oxide, silicon nitride, aluminum nitride, silica-coated aluminum nitride, boron nitride, and combinations thereof.

17. (Original) A thermosetting resin composition according to claim 10, wherein the anhydride compounds of the curing agent component may be selected from the group consisting of hexahydrophthalic anhydride, methyl hexahydrophthalic anhydride, 5-(2,5-dioxotetrahydrol)-3-methyl-3-cyclohexene-1,2-dicarboxylic anhydride, and combinations thereof.

18. (Original) A thermosetting resin composition according to claim 10, wherein the amine compounds of the curing agent component may be selected from the group consisting of dicyandiamide, diethylenetriamine, triethylenetetramine, diethylaminopropylamine, m-xylenediamine, diaminodiphenylamine, isophoronediamine, menthenediamine, polyamides, 4,4'-methylenedianiline, 4,4'-methylenebis(cyclohexylamine), and combinations thereof.

19. (Original) A thermosetting resin composition according to claim 10, wherein the amide is dicyandiamide.

20. (Original) A thermosetting resin composition according to claim 10, wherein the imidazole compounds of the curing agent component may be selected from the group consisting of imidazole, isoimidazole, 2-methyl imidazole, 2-ethyl-4-methylimidazole, 2,4-dimethylimidazole, butylimidazole, 2-heptadecenyl-4-methylimidazole, 2-methylimidazole, 2-undecenylimidazole,

1-vinyl-2-methylimidazole, 2-n-heptadecylimidazole, 2-undecylimidazole, 2-heptadecylimidazole, 2-ethyl 4-methylimidazole, 1-benzyl-2-methylimidazole, 1-propyl-2-methylimidazole, 1-cyanoethyl-2-methylimidazole, 1-cyanoethyl-2-ethyl-4-methylimidazole, 1-cyanoethyl-2-undecylimidazole, 1-cyanoethyl-2-phenylimidazole, 1-guanaminoethyl-2-methylimidazole, addition products of an imidazole and trimellitic acid, addition products of an imidazole and 2-n-heptadecyl-4-methylimidazole, phenylimidazole, benzylimidazole, 2-methyl-4,5-diphenylimidazole, 2,3,5-triphenylimidazole, 2-styrylimidazole, 1-(dodecyl benzyl)-2-methylimidazole, 2-(2-hydroxyl-4-t-butylphenyl)-4,5-diphenylimidazole, 2-(2-methoxyphenyl)-4,5-diphenylimidazole, 2-(3-hydroxyphenyl)-4-,5-diphenylimidazole, 2-(p-dimethylaminophenyl)-4,5-diphenylimidazole, 2-(2-hydroxyphenyl)-4,5-diphenylimidazole, di(4,5-diphenyl-2-imidazole)-benzene-1,4, 2-napnthyl-4,5-diphenylimidazole, 1-benzyl-2-methylimidazole, 2-p-methoxystyrylimidazole, and combinations thereof.

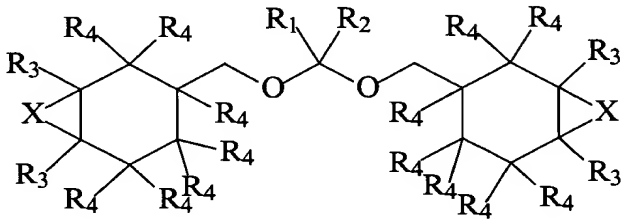
21. (Original) A thermosetting resin composition according to claim 10, wherein the curing agent component is used in an amount of from about 3 to about 60 parts by weight, per 100 parts by weight of the curable resin.

22. (Original) A thermosetting resin composition according to claim 10, wherein the curing agent component is used in an amount of from about 5 to about 40 parts by weight, per 100 parts of the curable resin.

23. (Original) A thermosetting resin composition according to claim 10, wherein the thermosetting resin composition is capable of sealing underfilling between a semiconductor device including a semiconductor chip mounted on a carrier substrate and a circuit board to which said semiconductor device is electrically connected, reaction products of which are capable of softening and losing their adhesiveness under exposure to temperature conditions in excess of those used to cure the composition.

24. (Currently Amended) An electronic device comprising a semiconductor device and a circuit board to which said semiconductor device is electrically connected assembled using a thermosetting resin composition according to Claim ~~1~~ 10 as an underfill sealant between the semiconductor device and the circuit board, wherein reaction products of the composition are capable of softening and losing their adhesiveness under exposure to temperature conditions in excess of those used to cure the composition.

25. (Original) A compound represented by the formula:



where R_1 and R_2 are each independently selected from hydrogen, methyl, ethyl, propyl, phenyl, hydroxyphenyl, methoxyphenyl, tolyl, and benzyl; each R_3 is independently selected from hydrogen, methyl, ethyl, propyl, and isopropyl; each R_4 is independently selected from hydrogen, methyl, ethyl, propyl, isopropyl, butyl, isobutyl, *t*-butyl, C_{1-4} alkoxy, halogen, cyano and nitro; and X is independently selected from O and S, provided that at least one X is S.

26. (Cancelled)